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(54) WATER SOLUBLE RESIN COMPOSITION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide water soluble resin compositions which excel in coating properties on different levels in a resist pattern and dimensional controllability in forming finer patterns and can be crosslinked and cured by an acid supplied from the resist patterns.

SOLUTION: A water soluble resin composition comprises (1) a water soluble resin, (2) a water soluble crosslinking agent, (3) at least one surface active agent selected from an acetylene alcohol, an acetylene glycol, a polyethoxylate of an acetylene alcohol, and a polyethoxylate of an acetylene glycol, and (4) a solvent composed of water or a mixture of water and a water soluble solvent. This water soluble resin composition is coated on a resist pattern and heated, and uncrosslinked portions of the water soluble resin coated layer are developed and removed. Thus, finer trench patterns and hole patterns are effectively formed.

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